ODP-83-7029
23 February 1983

MEMORANDUM FOR: Chairman, Publications Review Board

VIA: Deputy Director for Administration
Director of Data Processing

FROM: [redacted] STAT
Executive Officer
Office of Data Processing

SUBJECT: Request to Give a Presentation

[redacted] ILLEGIB

1. [redacted] Chief of Systems Support Division in STAT ODP has been invited to make a presentation on 25 March 1983 to the Third National Symposium on EDP Quality Assurance, sponsored by the Data Processing Management Association (DPMA). Mr. [redacted] presentation is on "A Practical Application Using Risk STAT Analysis."

2. When [redacted] was Chief of Quality Assurance Division STAT in ODP, his division developed and applied a risk analysis questionnaire to a portfolio of projects in ODP Applications. The presentation focuses on the development and application of the risks questionnaire rather than on the projects on which it was applied.

3. Attached are: a biographical sketch of [redacted] an STAT outline and corresponding draft copies of viewgraph slides of his presentation, a copy of the Risk Questionnaire, and a copy of the brochure for the conference. [redacted] conference registration STAT fees will be paid by DPMA. His presentation is entirely unclassified. [redacted] ILLEGIB

4. [redacted] requests approval to attend the conference and STAT make a presentation on "A Practical Application Using Risk Analysis". [redacted] ILLEGIB STAT

[redacted]

SUBJECT: Request to Give a Presentation

AUTHOR'S NAME: [redacted] STAT

TITLE OF PRESENTATION: A Practical Application Using Risk

I have reviewed the material attached to this request, and have found it to the best of my knowledge to be unclassified, and approve it for presentation at the conference [redacted] STAT has been requested to attend.

[redacted] STAT

3.1.83
Date

Signed: James H. McDonald
Harry E. Fitzwater, DDA

8 MAR 1983
Date

Attachments:
A - Biographical Sketch
B - Outline
C - Copy of Slides
~~D - Risk Questionnaire~~
~~E - Conference Brochure~~
F - 879

ODP/A/SSD/[redacted] (23Feb83) STAT

Distribution:
Original - Addressee (w/atts)
1 - DD/A Chrono (w/o atts)
1 - SSD Chrono (w/atts)
2 - ODP Registry (w/o atts)
~~1~~ - DDA (w/o atts)
2 - D/ODP (1 w/atts) Chrono & Subj:PR:Pubs&PresentApproval
~~1 - CH/PAB/ORSA (w/atts)~~
1 - C/EAB/SSD/OS (w/atts)
? 1 - DIOPA

[redacted] ILLEGIB

A Practical Application Using Risk Analysis

I. Take as the definition of project risk:

Project Risk (high/low) is some measure of expectation (high/low) that the critical requirements of a project will fail to be met.

II. Identifying Risk Factors:

A. McFarlan article in the Harvard Business Review

B. Project characterization

III. Risk Questionnaire:

A. Generation of questions

B. Weighting of questions

IV. Results of Questionnaire:

A. High Risk

B. Low Risk

V. Application of Results of Questionnaire:

A Practical Application Using Risk Analysis

Presentation to:

Third National Symposium
On EDP Quality Assurance

25 March 1983

Project RISK (high/low) is same measure of expectations (high/low)
that the crtical requirements of a project will fail to be met.

Identifying Risk Factors

- McFarlan article
- Project Characterization

Risk Questionnaire

- Generation of questions
- Weighting of questions

Results of Questionnaire

- High Risk
- Low Risk

Application of Results of Questionnaire

RISK ASSESSMENT

QUESTIONNAIRE

for

APPLICATION SOFTWARE PROJECTS

Prepared By:
Verification & Validation Branch
Quality Assurance Division
Office of Data Processing

Sanitized Copy Approved for Release 2010/06/07 : CIA-RDP85-00142R000300200005-4

PROJECT RISK ASSESSMENT QUESTIONNAIRE

Project: _____ Date: _____

PRISM Project Number: _____ Div/Branch: _____

Preparer: _____ Phone: _____

Reviewer: _____ Phone: _____

Current System Status (check one):

1. System Initiation Phase
   - Preliminary System Requirements Development _____
   - Detailed System Requirements Development _____
2. System Definition Phase _____
3. System Design Phase
   - Preliminary System Design _____
   - Detailed System Design _____
4. System Implementation and Integration Phase _____
5. System Operations and Support Phase
   - Major system change in progress _____
   - Minor system change in progress _____
   - Inactive _____

SIZE RISK ASSESSMENT		WEIGHT
1. Total development person-hours for system development/enhancement		2
100 to 5,000	Low - 1	
5,000 to 25,000	Medium - 2	
More than 25,000	High - 3	
2. What is estimated project implementation (FOC) time?		2
12 months or less	Low - 1	
13 months to 24 months	Medium - 2	
More than 24 months, with phased implementation (IOC to FOC)	High - 3	
More than 24 months, no phasing	High - 4	
3. Can the project be successfully completed within schedule?		3
Highly likely	Low - 1	
Success is likely, or unable to estimate	Medium - 2	
Somewhat doubtful	High - 3	
Highly unlikely	High - 4	
4. What is the project funding ?		2
ODP controls funding	Low - 1	
Joint ODP/User funding control	Medium - 2	
Major multi-level program funding level required	High - 3	

SIZE RISK ASSESSMENT		WEIGHT
5. How are the testing resources allocated to the system development cycle ?		2
Greater than 40%	Low - 1	
20% to 40%	Medium - 2	
Less than 20%	High - 3	
6. Number of logical data groupings which are interrelated (estimate if unknown)		1
Less than 4	Low - 1	
4 to 6	Medium - 2	
More than 6	High - 3	
7. How many transaction types are projected?		1
Less than 6	Low - 1	
6 to 25	Medium - 2	
More than 25	High - 3	
8. How many output reports are projected?		1
Less than 10	Low - 1	
10 to 20	Medium - 2	
More than 10	High - 3	

STRUCTURE RISK ASSESSMENT		WEIGHT
1. Age of existing automated system (since last major change)		3
Over 2 years	Low - 1	
1 to 2 years, or unknown	Medium - 2	
Less than 1 year	High - 3	
N/A, i.e., no existing automated system	High - 3	
2. Frequency of change to proposed/existing system (Form 930/Applications Work Order)		3
N/A; no existing automated system or sufficient development effort underway on which to base estimate	N/A - 0	
Less than 2 per year	Low - 1	
2 to 10 per year	Medium - 2	
More than 20 per year	High - 3	
3. Extent of total system changes in last year		3
N/A; no changes	N/A - 0	
Affecting less than 10% of programs	Low - 1	
Affecting 10% to 25% of programs	Medium - 2	
Affecting more than 25% of programs	High - 3	

STRUCTURE RISK ASSESSMENT		WEIGHT
4. Severity of system change to be performed		3
N/A; new development	N/A - 0	
Minor change(s)	Low - 1	
Significant but manageable change	Medium - 2	
Major changes in regard to system functionality and/or resource needs to accomplish change	High - 4	
5. Project performance site		2
Government facility	Low - 1	
Local, non-government facility	Medium - 2	
Not in local area	High - 5	
6. Staffing of the project (critical staff)		2
In-house (government)	Low - 1	
Contractor, sole-source	Medium - 2	
Contractor, competitive bid	High - 6	
7. What is the type of project organization ?		3
Line and staff; project has total management control of development personnel	Low - 1	
Mixture of line and staff with matrix-managed elements	Medium - 2	
Matrix; no management control transferred to project	High - 3	

STRUCTURE RISK ASSESSMENT		WEIGHT
8. Is a subcontractor relationship a potential problem in a contracted effort ?		5
N/A; question not applicable to this project	N/A - 0	
Subcontractor not assigned to an isolated or critical task; prime contractor has previously managed subcontractor successfully	Low - 1	
Subcontractor assigned to all development tasks in a subordinate role to prime contractor; ODP has favorable experience with subcontractor on other effort(s)	Medium - 2	
Subcontractor has sole responsibility for critical task; subcontractor new to Agency environment	High - 3	
9. What is the status of the project team training plan ?		2
N/A; no training plan required	N/A - 0	
Complete plan in place	Low - 1	
Plan under development	Medium - 2	
No plan available	High - 3	
10. What is the level of skill used to train project team ?		3
N/A; no training required	N/A - 0	
Knowledgeable on all systems	Low - 1	
Knowledgeable on major components	Medium - 2	
Few components understood	High - 3	

STRUCTURE RISK ASSESSMENT		WEIGHT
11. How accessable are supporting reference and/or compliance documents/information on proposed/existing system?		3
Readily available	Low - 1	
Details available with some difficulty and delay	Medium - 2	
Great difficulty in obtaining details, except with much delay	High - 3	
12. What is the availability of documentation for the current system (manual or automated) ?		3
Complete and current	Low - 1	
More than 75% complete and current	Medium - 2	
Major system and applications undocumented or outdated	High - 6	
13. What is the nature of Periodic Maintenance support with respect to updating project documentation ?		3
N/A; new development project	N/A - 0	
Close coordination	Low - 1	
Significant but manageable	Medium - 2	
Major changes with poor coordination	High - 5	

STRUCTURE RISK ASSESSMENT		WEIGHT
14. How well does documentation reflect specification/ program changes?		3
N/A; new development project	N/A - 0	
Audit trail excellent; good maintenance and availability of documentation	Low - 1	
Audit trail good; some problems with maintenance and availability	Medium - 2	
Poor audit trail, inadequate for proper maintenance and availability	High - 3	
15. What is the documentation approach for the proposed/existing system?		3
Excellent standards closely adhered to and carried out as integral part of system and program development	Low - 1	
Adequate practices but not uniformly adhered to	Medium - 2	
Poor or no standards; where standards; exist, minimal adherence	High - 3	
16. What is the approach to development and production library control?		3
Excellent standards, closely adhered to	Low - 1	
Adequate practices, but not uniformly adhered to	Medium - 2	
Poor or no standards; where standards exist, minimal adherence	High - 3	
17. What special test facilities are available for subsystem testing ?		2
Complete or not required	Low - 1	
Limited	Medium - 2	
None available	High - 3	

STRUCTURE RISK ASSESSMENT		WEIGHT
18. What is the status of the project life cycle planning ?		2
Current and complete plan	Low - 1	
Plan under development	Medium - 2	
No plan present	High - 3	
19. What contingency plans are in place to support the operational mission should the development/enhancement not be completed on schedule ?		2
N/A; none required	N/A - 0	
Complete plan	Low - 1	
Major subsystems addressed	Medium - 2	
None available	High - 3	
20. What is the availability of support for the test teams ?		1
In place and current	Low - 1	
Only planned	Medium - 2	
Major omissions or unplanned	High - 3	
21. User approval of specifications		4
Formal, written approval based on structured, detailed review processes	Low - 1	
Formal, written approval based on informal, unstructured, detailed review processes	Medium - 2	
No formal approval; cursory review	High - 3	

STRUCTURE RISK ASSESSMENT		WEIGHT
22. How much is the development impacted by external systems?		5
N/A; no external systems involved	N/A - 0	
All critical inter-system communications controlled through Interface Control Documents; standard protocols utilized; interfaces are stable	Low - 1	
All critical inter-system communications controlled through Interface Control Documents; some protocols may be non-standard; interfaces change infrequently	Medium - 2	
Not all critical inter-system communications are controlled through Interface Control Documents; some protocols may be non-standard; some interfaces change frequently	High - 3	
23. What is the type and adequacy of the Configuration Management Planning ?		2
Complete and functioning	Low - 1	
Undergoing revisions for inadequacies	Medium - 2	
None available	High - 3	

STRUCTURE RISK ASSESSMENT		WEIGHT
24. Are the development standards and guidelines realistic and state-of-the-art?		4
N/A; in total compliance with ODP standards	N/A - 0	
The standards employ structured programming concepts, reflect current methodology and permit tailoring to the nature and scope of the development project	Low - 1	
The standards require a top-down approach and offer some flexibility in application	Medium - 2	
The standards are out-of-date and require the application of all aspects (of standards) to the development project	High - 3	
25. Is a baseline control process integral to the overall development discipline?		5
N/A; in total compliance with ODP standards	N/A - 0	
A formal, hierarchical baseline structure is required; and each baseline, once approved, is placed under configuration management	Low - 1	
An informal baseline structure is utilized; Minimal configuration control is applied	Medium - 2	
No baseline control mechanism is required	High - 3	

STRUCTURE RISK ASSESSMENT		WEIGHT
26. Is the development/enhancement based on well-specified, stable requirements?		5
The requirements documentation contains detailed transaction and parametric data; high degree of requirements stability	Low - 1	
The requirements documentation contains detailed transaction data; requirements modifications limited to pre-PDR	Medium - 2	
The requirements documentation is vague; requirements perturbate throughout the total development	High - 5	
27. Does the development employ objective project control techniques?		4
Comprehensive earned value techniques applied; high degree of management visibility into cost and schedule status	Low - 1	
Some earned value methodology applied; some management visibility into cost and schedule status	Medium - 2	
No objective status measurement techniques employed; management visibility based primarily on gross resource expenditures	High - 3	

STRUCTURE RISK ASSESSMENT		WEIGHT
28. Relationships between offices (other than ODP) involved with system, i.e., users, customers, sponsors, interfaces; those who must be dealt with during the project effort		3
No significant conflicting needs; serves primarily one organizational unit	Low - 1	
Meets limited conflicting needs of cooperative organizational units	Medium - 2	
Must meet important conflicting needs of several cooperative organizational units	High - 3	
Must meet important conflicting needs of several uncooperative organizational units	High - 4	
29. What is severity of procedural changes in user department caused by proposed system/system enhancement?		3
No changes	Low - 0	
Minimal changes	Low - 1	
Moderate, neither extreme; or unknown	Medium - 2	
Significant changes	High - 3	
30. Does user organization have to change structurally to meet requirements of new system/system enhancements?		3
Minimal	Low - 1	
Somewhat	Medium - 2	
Major	High - 3	

STRUCTURE RISK ASSESSMENT		WEIGHT
31. What is general user attitude?		5
Good - values data processing solution	Low - 1	
Fair - some reluctance	Medium - 2	
Poor - does not appreciate data processing solution	High - 3	
32. How well established are the people, procedures, knowledge, discipline; and division of details in the offices that (plan to) use the system, i.e., is the job the proposed/existing system performs well defined and understood?		4
Situation satisfactory	Low - 1	
Situation satisfactory but could stand some improvement	Medium - 2	
Situation leaves much to be desired	High - 3	
33. Is there a joint developer/user team?		5
N/A; project size < 2000 hrs	N/A - 0	
Full-time user representation and project size > 2000 hrs	Low - 1	
Part-time user representation and project size between 2000 - 5000 hrs	Meduim - 2	
Part-time user representation and project size between 5000 - 10000 hrs	Medium - 3	
Part-time user representation and project size > 10000 hrs	High - 4	
No user representation and project size > 2000 hrs	High - 6	

STRUCTURE RISK ASSESSMENT		WEIGHT
34. Commitment of upper-level user management to system		3
Extremely enthusiastic	Low - 1	
Adequate	Medium - 2	
Some reluctance or unknown	High - 3	
35. Is project dependent on contribution of technical effort from other divisions in ODP, e.g., Systems Programming Division to install new system software?		2
no	Low - 1	
Yes; from Division(s) within Applications	Medium - 2	
Yes;from Division(s) outside of Applications (as well as possibly from those within)	High - 3	
36. How knowledgeable is user in the field of data processing?		2
High degree of capability	Low - 1	
Previous exposure, but limited knowledge	Medium - 2	
First exposure	High - 3	
37. How knowledgeable is user in proposed application area (attempt to assess satisfactory use/operation of system by user)?		2
Previous experience	Low - 1	
Conceptual understanding	Medium - 2	
Limited	High - 4	
38. How knowledgeable is project team in proposed application area?		3
Previous experience	Low - 1	
Conceptual understanding	Medium - 2	
Limited	High - 4	

STRUCTURE RISK ASSESSMENT		WEIGHT
39. What degree of control does the project management have ?		2
Formal authority commensurate with assigned responsibility	Low - 1	
Informal authority commensurate with assigned responsibility	Medium - 2	
No authority delegated along with responsibility	High - 3	
40. Are there effective project communications?		2
Easy access to project manager(s); change information transmitted expeditiously both upward and downward	Low - 1	
Limited access to project manager(s); downward communication limited	Medium - 2	
Aloof project management; planning information closely held	High - 3	

STRUCTURE RISK ASSESSMENT		WEIGHT
41. How well does developed system conform to system specifications?		3
N/A; new system	N/A - 0	
Operational tests indicate actual procedures and operations produce desired results	Low - 1	
Limited tests indicate that actual procedures and operations differ in only minor respects	Medium - 2	
Actual procedures and operations differ in important respects; specifications insufficient to use for testing	High - 3	
42. Is the project dealing with highly sensitive information?		1
No	Low - 0	
Yes	High - 3	
43. Does the location of the work require the use of specially packaged equipment not currently available?		1
No	Low - 0	
Yes	High - 3	
44. Level of clearance required to work on project		2
N/A; no problem, project team has required clearances	N/A - 0	
Need person(s) with low level clearance	Medium - 2	
Need person(s) with high level clearance	High - 3	

STRUCTURE RISK ASSESSMENT		WEIGHT
41. How well does developed system conform to system specifications?		3
N/A; new system	N/A - 0	
Operational tests indicate actual procedures and operations produce desired results	Low - 1	
Limited tests indicate that actual procedures and operations differ in only minor respects	Medium - 2	
Actual procedures and operations differ in important respects; specifications insufficient to use for testing	High - 3	
42. Is the project dealing with highly sensitive, compartmented information?		1
No	Low - 0	
Yes	High - 3	
43. Does the location of the work require the use of TEMPEST certified equipment not currently available ?		1
No	Low - 0	
Yes	High - 3	
44. Level of clearance required to work on project		2
N/A; no problem, project team has required clearances	N/A - 0	
Need person(s) with SECRET clearance but non-badged (ISA/S)	Medium - 2	
Need person(s) with TOP SECRET clearance and badged (ISSA/TS)	High - 3	

TECHNICAL RISK ASSESSMENT		WEIGHT
1. Can user fulfill mission during hardware/software failure?		2
Mission can be accomplished without system	Low - 1	
Mission can be accomplished without fully operational system, but some minimum capability required	Medium - 2	
Mission cannot be accomplished without fully automated system	High - 6	
2. What is the required availability of the proposed system?		2
Periodic use, weekly or less frequent	Low - 1	
Required for daily use, but not 24 hours/day	Medium - 2	
Required for 24 hours/day use	High - 5	
3. Does proposed/existing automated system rely on exchange of data with other external systems, i.e., interfaces, as a necessary part of its function?		2
Does not require the receipt of data from another external system to be functional, sends no data to other systems required for their operation	Low - 0	
Must send/receive data to or from another system	Medium - 2	
Must send/receive data to or from multiple systems	High - 3	
4. If proposed/existing system has external interfaces, what is the nature of system-to-system communication?		1
System has no external interfaces	Low - 0	
Automated communication link utilizing standard protocols	Medium - 2	
Automated communication link utilizing non-standard protocols	High - 3	

TECHNICAL RISK ASSESSMENT		WEIGHT
5. What are the size limitations of proposed system?		2
Substantial unused capacity	Low - 1	
Within capacities	Medium - 2	
Pushes capacity near limits	High - 3	
6. How extensive are input data control procedures in the system environment?		3
Extensive error checking of input data	Low - 1	
Gross error checking	Medium - 2	
No error checking	High - 3	
7. What percentage of the current system is directly transferable to the proposed system?		3
N/A; no current system involved	N/A - 0	
50% - 100%	Low - 1	
25% - 50%	Medium - 2	
0% - 25%	High - 3	
8. What type of system hardware will be installed?		3
N/A; no hardware to be added	N/A - 0	
Standard ODP batch/ online systems	Low - 1	
Non standard ODP peripherals	Medium - 2	
Non standard ODP peripherals and mainframes	High - 3	

TECHNICAL RISK ASSESSMENT		WEIGHT
9. What was the basis for the programming and system software selections?		3
Decision based on architectural analysis of functional and performance requirements	Low - 1	
Decision based on similar system development experience	Medium - 2	
Decision based on current inventory of system software, and existing programming language skills	High - 3	
10. How complex is the projected system?		2
Single function (e.g., word processing only)	Low - 1	
Multiple, but related functions (e.g., message generation, editing, and dissemination)	Medium - 2	
Multiple, but not closely related (e.g., data base query, statistical manipulation, graphics plotting, text editing)	High - 3	
11. What level of programming language is projected?		2
High level in wide usage	Low - 1	
Low - 1 level or machine language in wide usage	Medium - 2	
Special purpose language, extremely limited usage	High - 3	

TECHNICAL RISK ASSESSMENT		WEIGHT
12. How well suited is the programming language to the application(s)?		2
All modules can be coded in a straightforward manner, in the chosen language	Low - 1	
All modules can be coded in a straightforward manner, with few programming workarounds required	Medium - 2	
A significant number of programming workarounds required, in order to compensate for deficiencies in the selected language	High - 3	
13. How familiar is the hardware architecture?		2
Mainframe and peripherals widely used within ODP	Low - 1	
Peripherals unfamiliar	Medium - 2	
Mainframe unfamiliar	High - 4	
14. Pioneering aspects (extent to which the system applies new, difficult, and unproven techniques on a broad scale or in a new situation).		5
Conservative - No untried system components, no pioneering system objectives or techniques	Low - 1	
Moderate - Few untried systems components and their functions are moderately important; few, if any pioneering system objectives and techniques	Medium - 2	
Aggressively pioneering - More than a few relatively untried hardware or software components or system objectives	High - 3	

TECHNICAL RISK ASSESSMENT		WEIGHT
15. How well suited is the projected hardware to the application environment?		2
N/A; standard ODP hardware being used	N/A - 0	
Architecture highly compatible with required functions	Low - 1	
Architecture sufficently powerful, but not particularly efficient	Medium - 2	
Architecture dictates complex software workarounds	High - 3	
16. What kind of development tools exist ?		5
Comprehensive set of automated and documented procedural tools available	Low - 1	
Limited set of automated and documented procedural tools available	Medium - 2	
No tools planned	High - 3	
17. How realistic is the development system?		5
N/A; no separate development system	N/A - 0	
Identical operational and development system	Low - 1	
Similar operational and development systems	Medium - 2	
Major architectural differences between operational and development systems	High - 3	
18. Margin of error (necessity for everything to work perfectly, for "split-second timing" for great cooperation (including external parties), etc.)		5
Comfortable margin	Low - 1	
Realistically demanding	Medium - 2	
Very demanding; unrealistic	High - 3	

TECHNICAL RISK ASSESSMENT		WEIGHT
19. Is the application software (e.g., PL1, GIMS, RAMIS, FORTRAN) new to project team?		2
Team is well experienced	Low - 1	
Some experience or experience unknown	Medium - 2	
Inexperience with programming language or data base	High - 3	
20. Is the system environment supporting the application new to the project team? (more than one selection may apply)		2
Team is well experienced	Low - 1	
Some experience or experience unknown	Medium - 2	
Inexperience with:		
Operating system	High - 3	
DBMS	High - 3	
Data communications	High - 3	
21. How knowledgeable is project team in proposed application area?		2
Previous experience	Low - 1	
Conceptual understanding	Medium - 2	
Limited	High - 3	
22. What kind of test tools are planned?		5
Comprehensive test/debug software including path analyzers	Low - 1	
Formal, documented procedural tools only	Medium - 2	
None	High - 3	

TECHNICAL RISK ASSESSMENT		WEIGHT
23. How realistic is the test environment?		4
Tests performed on operational system with total data base and communications environment	Low - 1	
Tests performed on separate development system with total data base, but limited communications	Medium - 2	
Tests performed on dissimilar development system, with limited data base and limited communications	High - 3	
24. How are communication interfaces to be tested?		4
N/A; no interfaces required	N/A - 0	
Live testing on actual line at operational transaction rates	Low - 1	
Loop testing on actual line, simulated transactions	Medium - 2	
Line simulations within development system	High - 3	
25. Can critical component testing be performed with sufficient leadtime to permit redirection?		2
Major tests can be performed before all hardware/software deliveries are received	Low - 1	
Only limited testing can be performed before all hardware/software deliveries are received	Medium - 2	
No testing can be performed without all components in place, only simulations	High - 3	

TECHNICAL RISK ASSESSMENT		WEIGHT
26. What is the training environment?		1
Little training needed to use or operate system, documentation sufficient for training purposes	Low - 1	
Users and/or operators can manage without formal training, but expertise is required in addition to documentation	Medium - 2	
Users essentially are unable to use system without training, formal, hands-on training needed in addition to documentation	High - 3	
27. Is maintenance configuration complex ?		1
A single version of one system to maintain	Low - 1	
Essentially one user system, but training/development versions must be maintained	Medium - 2	
Multiple user versions of system in operation on different CPUs and/or different computer centers	High - 3	
28. How adaptable is the proposed system to change		3
High degree, structured programing techniques used, relatively unpatched, well documented.	Low - 1	
Moderate degree	Medium - 2	
Low degree, due to monolithic program design, high degree of inter/intra system dependency, unstructured development, minimal documentation, etc.	High - 4	

TECHNICAL RISK ASSESSMENT | WEIGHT

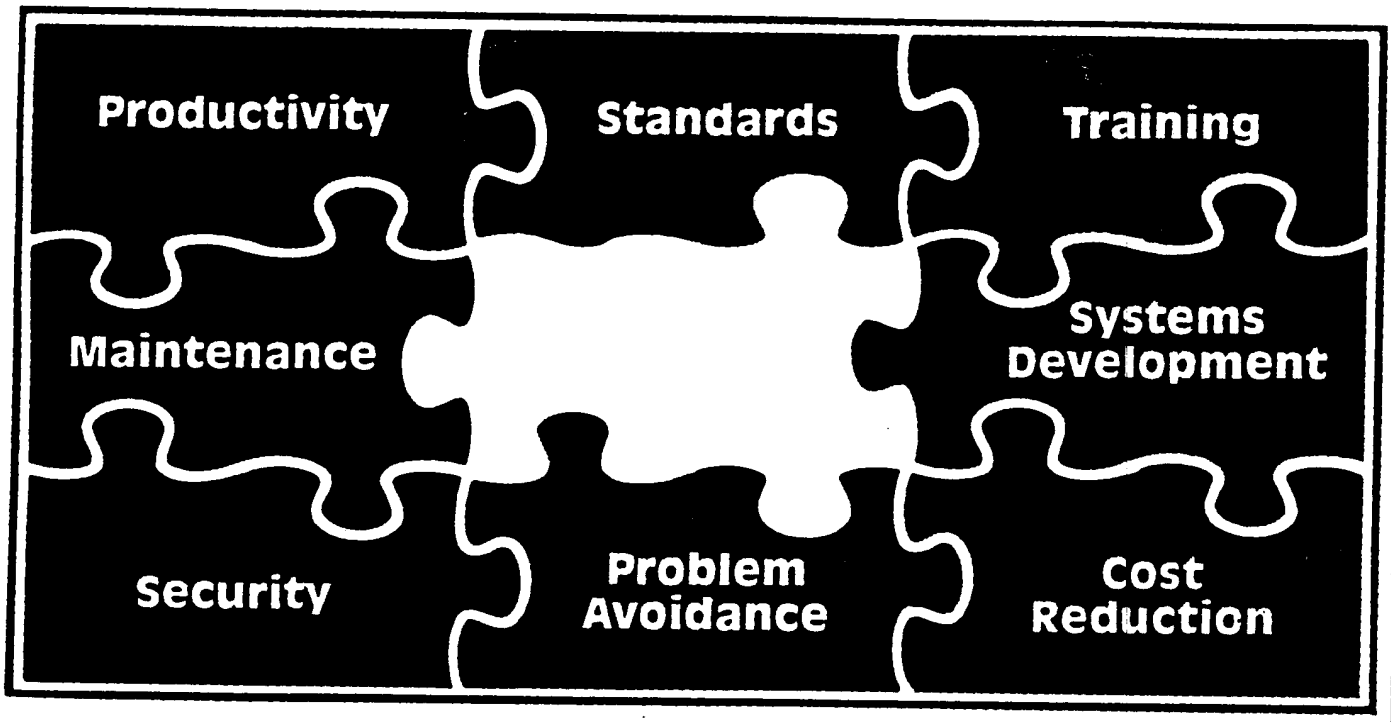
29. What is the nature and type of deliverables (software, documentation, etc.) required for the project ? — 2

Relatively small in scope and complexity and tailored to the needs of the user and system maintenance activities	Low - 1
Determined by selection, based on project scope and type, from a standard list of well-defined deliverables	Medium - 2
Rigid application of exhaustive deliverable standard, regardless of project scope and type	High - 3

Third National Symposium on

EDP Quality Assurance

Putting It All Together



Including Four How-To-Do-It Full-Day Workshops March 23, 1983

Establishing the Quality Assurance Function	**The Job of the Quality Assurance Manager**
Reviewing Controls in Systems Under Development	**Conducting Quality Assurance Inspections**

Sponsored by:
Data Processing Management Association Education Foundation
Dedicated to expanding educational opportunities for information systems professionals

March 23-25, 1983
Chicago, Illinois

Conference Management by: **U.S. Professional Development Institute**

CONCURRENT PRECONFERENCE WORKSHOPS

Wednesday, March 23, 1983

9:00 a.m.-5:00 p.m.

Conducting Quality Assurance Inspections

The workshop explains how to conduct an inspection of a project under development. Emphasizes cost/benefit of inspections and contrasts inspections with reviews. Inspection tools and methods are also described.

Workshop Leader: **Robert Ebenau**
President
Software Methodology, Inc.

Establishing the Quality Assurance Function

This workshop provides the participant with the necessary information for establishing the quality assurance function. It develops guidelines on how to prepare and implement quality assurance standards, and how to verify compliance with these standards.

Workshop Leader: **William E. Perry**
Executive Director
Quality Assurance Institute

The Job of the Quality Assurance Manager

The workshop presents: (1) critical success practices of the QA Manager; (2) major strategies for leadership in quality improvement; and (3) principles and skills of managing the administrative, technical, and political responsibilities and tasks of the job.

Workshop Leader: **M. H. Schwartz**
General Manager
Software Quality Service, Inc.

Reviewing Controls in Systems Under Development

Workshop stresses the value of controls as contributing to quality software development and operational systems. Explains controls by type, identifying effectiveness and efficiency.

Workshop Leader: **Ernest A. Reigstad**
Manager, MIS Planning and Policies
Warner-Lambert Company

CONFERENCE PROGRAM AND SCHEDULE

Thursday, March 24, 1983

A.M.

8:00 Registration

9:00 Conference chairman's opening remarks on:
The Ten Commandments of EDP Quality Assurance
William E. Perry
Executive Director
Quality Assurance Institute

9:15 Keynote Address: **The Effect of Data Processing Quality on the Enterprise**
John B. Jackson
Vice President, Quality
IBM Corporation

10:00 **Results of the IEEE Project on Standards for Software Quality Assurance**
Fletcher J. Buckley
IEEE Project Manager
RCA Corporation

11:00 **The People Part of Quality — Instilling the Desire for Quality**
Roy W. Walters
President
Roy W. Walters & Associates

12:00 Lunch

CONCURRENT SESSIONS

	ESTABLISHING AND BUILDING THE QA FUNCTION TRACK	STRENGTHENING THE ESTABLISHED FUNCTION TRACK	ADVANCED QA TOPICS TRACK
P.M. **1:15**	**Obtaining Support from Systems and Programming Personnel for Quality Concepts** • Impediments to quality • Selling quality to analysts and programmers • Using consultants to sell quality • Selling senior management **Stephen A. Bender** *Director of Quality Assurance* Upstate Computer Center, Inc.	**Reviewing the Quality of System Requirements** • Quality requirements • Establishing review standards • How to measure quality • Determining when and where to review **Michael E. Fagan** *Manager* IBM Quality Institute	**Making Reviews Effective Change Agents** • Effective review statements • A certification methodology • Defining change • Case study example **Edward O. Joslin** *Manager* U.S. Department of Agriculture
3.00	**Controlling Changes to Applications Systems** • Change control methods • Updating documentation • Maintaining quality measurements • Effect on schedules and budgets **Mary Kay Holtrop** *Quality Assurance Manager* Valley National Bank	**Having Systems and Programming Personnel Conduct Technical Reviews** • Setting review responsibilities • Review strategy • Selecting a review group • Getting the program started **James M. Jones, III** *Manager of Systems Development* McCormick & Company, Inc.	**Effective Testing Tools and Techniques** • Setting testing objectives • Automating the test process • Designing a test plan • Overview of testing tools **Denis C. Meredith** *Product Support Manager* Management and Computer Services, Inc.

4:00-7:00 **QUALITY ASSURANCE SOFTWARE AND SERVICES SHOWCASE**

About the Sponsor

Data Processing Management Association Education Foundation

The DPMA Education Foundation, as an independent body representing practitioners, educators and researchers, seeks to provide leadership in identifying educational opportunities that will advance the information systems profession. An immediate Foundation objective is the dissemination of information among technical societies and the entire information systems community.

T.M.